NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [x] Initial [ ] Annual [ ] Special				Test Date: 5-2-78	
Company: H.N.G. Oil Co.			Connection		
Pool: Wildcat			Formation: Morrow		Unit
Completion Date: 5-2-78	Total Depth: 13,060		Plug Back TD: 12,948	Elevation: 3968.4 GL	Farm or Lease Name: Shoe Bar Ranch Unit
Csg. Size: 5½ - 4½ / Wt.: 17,13.5 / d: / Set At: 13,060				Perforations: From 12839 To 12848	Well No.: 1
Tbg. Size: 2 7/8 / Wt.: / d: / Set At: 11,000				Perforations: From To	Unit: 3 / Sec.: 17S / Twp.: 35E / Rge.:
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 11,017		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 190 @ 12844		Mean Annual Temp. °F: 68	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10,200	10,200	.642	0	0	0		4.026	Flange

NO.	FLOW DATA: Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						4047				
1.	4.026	1.50	250	32	94	3807	57			60 Min.
2.	4.026	1.50	380	44	108	3675	57			60 Min.
3.	4.026	1.50	410	51	75	3538	55			60 Min.
4.	4.026	1.50	580	65	89	3355	52			60 Min.
5.										

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	11.82	91.77	263.2	.9688	1.249	1.021	1340
2.	11.82	131.53	393.2	.9568	1.249	1.031	1916
3.	11.82	146.91	423.2	.9859	1.249	1.038	2220
4.	11.82	196.36	593.2	.9732	1.249	1.047	2954
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.39	554	1.49	.960
2.	.59	568	1.53	.940
3.	.63	535	1.44	.928
4.	.89	549	1.48	.912
5.				

Gas Liquid Hydrocarbon Ratio: 59 to 1 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 53 Deg.
Specific Gravity Separator Gas: .642 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 670 P.S.I.A. ____ P.S.I.A.
Critical Temperature: 372 R ____ R

P_c 5635.2 P_c^2 31755

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		5356.2	28689	3066
2		5206.2	27105	4650
3		5046.2	25464	6291
4		4832.2	23369	8386
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.7867$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.9412$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 8688$

Absolute Open Flow: 8,688 Mcfd @ 15.025 Angle of Slope θ: 51° Slope, n: .81

Remarks: PW Substituted for PT Measured with Amerada Instrument No. 34516 - 0-12,000# Element

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Pyle	Spruell	Pyle